

**COLORADO DISCHARGE PERMIT SYSTEM (CDPS)
FACT SHEET FOR PERMIT NUMBER CO0041840
CITY OF TELLURIDE, TELLURIDE REGIONAL WWTF
SAN MIGUEL COUNTY**

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I. TYPE OF PERMIT

- A. Permit Type:** Domestic - Major Municipal, Mechanical Plant, Forth Renewal
- B. Discharge To:** Surface Water

II. FACILITY INFORMATION

- A. SIC Code:** 4952 Sewerage Systems
- B. Facility Classification:** Class A per Section 100.5.2 of the Water and Wastewater Facility Operator Certification Requirements
- C. Facility Location:** 12000 Hwy 145 Telluride CO 81435; Latitude: 37.94866°N, Longitude: 107.87366° W
- D. Permitted Feature:** 001A, following disinfection and prior to mixing with the receiving stream. 37.94866°; 107.87366°
- The location(s) provided above will serve as the point(s) of compliance for this permit and are appropriate as they are located after all treatment and prior to discharge to the receiving water.
- E. Facility Flows:** 2.1 MGD

ISSUED

EFFECTIVE

EXPIRATION

F. Major Changes From Last Renewal:

Numeric permit limits for some metals have been added. Temperature monitoring has been added.

III. RECEIVING STREAM

A. Waterbody Identification: *COGUSM03b, the San Miguel River*

B. Water Quality Assessment:

An assessment of the stream standards, low flow data, and ambient stream data has been performed to determine the assimilative capacities for *the San Miguel River* for potential pollutants of concern. This information, which is contained in the Water Quality Assessment (WQA) for this receiving stream(s), also includes an antidegradation review, where appropriate. The Division's Permits Section has reviewed the assimilative capacities to determine the appropriate water quality-based effluent limitations as well as potential limits based on the antidegradation evaluation, where applicable. The limitations based on the assessment and other evaluations conducted as part of this fact sheet can be found in Part I.A of the permit.

Permitted Feature 001A will continue to be the authorized discharge point to the receiving stream.

IV. FACILITY DESCRIPTION

A. Infiltration/Inflow (I/I)

No infiltration/inflow problems have been documented in the service area.

B. Lift Stations

Table IV-1 summarizes the information provided in the renewal application for the lift stations in the service area.

Table IV-1 – Lift Station Summary

Station Name/#	Firm Pump Capacity (gpm)	Peak Flows (gpd)	% Capacity (based on peak flow)
Lawson Hill	2-5 hp (200 gpm)	7000	1.2
Public Works	2-3 hp (300 gpm)	50	0.005
Ball Park	2-5 hp (396 gpm)	3000	0.2

C. Chemical Usage

The permittee did not specify any chemicals for use in waters that may be discharged. On this basis, no chemicals are approved under this permit. Prior to use of any applicable chemical, the permittee must

submit a request for approval that includes the most current Material Safety Data Sheet (MSDS) for that chemical. Until approved, use of any chemical in waters that may be discharged could result in a discharge of pollutants not authorized under the permit. Also see Part II.A.1. of the permit.

D. Treatment Facility, Facility Modifications and Capacities

The facility consists of a headworks, aeration basins, secondary clarifier and UV disinfection. The permittee has not performed any construction at this facility that would change the hydraulic capacity of 2.1 MGD or the organic capacity of 3708 lbs BOD₅/day, which were specified in Site Approval 4535. That document should be referred to for any additional information.

Pursuant to Section 100.5.2 of the Water and Wastewater Facility Operator Certification Requirements, this facility will require a Class A certified operator.

E. Biosolids Treatment and Disposal

Waste activated sludge is pumped to one of two mixing tanks where a polymer is added. From the mixing tanks the sludge goes to two 70 gpm rotating drum thickeners to be thickened to 4 or 5% solids. The thickened biosolids are treated in four aerated digesters to Class B standards.

1. EPA General Permit

EPA Region 8 issued a General Permit (effective October 19, 2007) for Colorado facilities whose operations generate, treat, and/or use/dispose of sewage sludge by means of land application, landfill, and surface disposal under the National Pollutant Discharge Elimination System. All Colorado facilities are required to apply for and to obtain coverage under the EPA General Permit.

2. Biosolids Regulation (Regulation No. 64, Colorado Water Quality Control Commission)

While the EPA is now the issuing agency for biosolids permits, Colorado facilities that land apply biosolids must comply with requirements of Regulation No. 64, such as the submission of annual reports as discussed later in this rationale.

V. PERFORMANCE HISTORY

A. Monitoring Data

1. Discharge Monitoring Reports – The following tables summarize the effluent data reported on the Discharge Monitoring Reports (DMRs) for the previous permit term, from November 2007 through November 2012.

Table V-1 – Summary of DMR Data for Permitted Feature 001A

<i>Parameter</i>	<i># Samples or Reporting Periods</i>	<i>Reported Average Concentrations Avg/Min/Max</i>	<i>Reported Maximum Concentrations Avg/Min/Max</i>	<i>Previous Avg/Max/AD Permit Limit</i>	<i>Number of Limit Excursions</i>
<i>Influent Flow (MGD)</i>	58	0.7/0.43/1.1	0.91/0.48/1.4	Report/Report	
<i>Effluent Flow (MGD)</i>	58	0.7/0.43/1.1	0.91/0.48/1.3	2.1/NA	
<i>DO (mg/l)</i>	20	6.4/6/7	6.8/6.3/7.4	NA/NA	
<i>pH (su)</i>	58	6.7/6.1/7.2	7.4/7/8.4	NA - 6.5-9.0	
<i>Fecal Coliform (#/100 ml)</i>	20	6.1/1/46	59/6/1388	NA/NA	
<i>E. coli (#/100 ml)</i>	38	5.2/1/20	18/1/132	151/302	
<i>TRC (mg/l)</i>	5	0/0/0	0/0/0	0.02/0.064	
<i>NH3 as N, Tot (mg/l) Jan</i>	5	0.87/0.2/2.7	2.4/0.5/8.8	6.6/23	
<i>NH3 as N, Tot (mg/l) Feb</i>	5	0.37/0.13/0.73	0.73/0.22/1.2	6.6/26	
<i>NH3 as N, Tot (mg/l) Mar</i>	5	0.32/0.13/0.48	0.68/0.15/1.3	9.8/Report	
<i>NH3 as N, Tot (mg/l) Apr</i>	5	0.3/0.13/0.53	0.57/0.18/0.84	5.8/29	
<i>NH3 as N, Tot (mg/l) May</i>	5	0.34/0.1/0.86	0.67/0.15/1.9	6.1/Report	
<i>NH3 as N, Tot (mg/l) Jun</i>	5	0.65/0.08/1.9	2.3/0.13/8.2	6.6/Report	
<i>NH3 as N, Tot (mg/l) Jul</i>	5	0.53/0.13/1.1	1.5/0.21/3.5	6.5/Report	
<i>NH3 as N, Tot (mg/l) Aug</i>	4	0.52/0.2/0.94	0.86/0.5/1.2	4.3/Report	
<i>NH3 as N, Tot (mg/l) Sep</i>	5	0.27/0.1/0.61	0.51/0.15/1.1	11/Report	
<i>NH3 as N, Tot (mg/l) Oct</i>	4	0.31/0.07/0.6	0.83/0.15/1.6	4.9/Report	
<i>NH3 as N, Tot (mg/l) Nov</i>	5	0.27/0.17/0.51	0.66/0.4/0.99	5.6/Report	
<i>NH3 as N, Tot (mg/l) Dec</i>	5	1.4/0.2/3.9	3.8/0.4/7.8	6.6/24	
<i>BOD5, influent (mg/l)</i>	58	263/3.4/401	318/150/469	NA/NA/	
<i>BOD5, influent (lbs/day)</i>	58	1554/726/2271	2036/763/3529	NA/NA/	
<i>BOD5, effluent (mg/l)</i>	58	4.7/1.8/9.9	6.6/1.9/18	30/45/	
<i>BOD5 (% removal)</i>	58	98/95/99	NA/NA/NA	85/NA/	
<i>TSS, influent (mg/l)</i>	58	290/119/566	381/147/938	NA/NA/	
<i>TSS, effluent (mg/l)</i>	58	8.3/2.6/21	12/4.5/41	30/45/	
<i>TSS (% removal)</i>	58	97/87/99	NA/NA/NA	85/NA/	
<i>Oil and Grease (mg/l)</i>	59	NA/NA/NA	0/0/0	NA/NA/	
<i>TDS (mg/l)</i>		//	//	NA/NA/	
<i>PWS intake (mg/l)</i>	58	101/34/154	101/34/154	NA/NA/	
<i>WWTF effluent (mg/l)</i>	58	467/323/668	462/36/668	Report/Report/	

Table V-1 – Summary of DMR Data for Permitted Feature 001A, continued

Parameter	# Samples or Reporting Periods	Reported Average Concentrations Avg/Min/Max	Reported Maximum Concentrations Avg/Min/Max	Previous Avg/Max/AD Permit Limit	Number of Limit Excursions
As, TR (µg/l)	38	1.8/<0.002/5		Report/NA	<div>*only 2 sampling reported</div> <div>Reported as 0.018 and 0.017due to the unit confusion. DMR has be to corrected</div>
Cd, Dis (µg/l)	39	0.039/0/0.24	0/0/0*	Report/NA	
Cr+3, Dis (µg/l)	38	0.26/<10/10	0.26/<10/10	Report/Report	
Cr+6, Dis (µg/l)	37	1.6/<10/10	1.6/<10/10	Report/Report	
Cu, Dis (µg/l)	2	18/17/18	18/17/18	NA/NA	
CN, Tot (µg/l)	2	0/0/0	0.005/0.005/0.005	NA/NA	
Fe, TR (µg/l)	38	84/<50/240	NA/NA/NA	Report/NA	
Pb, Dis (µg/l)	38	1.4/0.1/6.2	1.7/0.1/7.9	Report/Report	
Mn, Dis (µg/l)	38	9.8/1.7/51	9.8/1.7/51	Report/Report	
Mo, TR (µg/l)	2	0/<0.05/0	0/<0.05/0	NA/NA	
Hg, Tot (µg/l)	38	0/<0.2/0	0/<0.2/0	Report/Report	
Ni, Dis (µg/l)	38	4.3/1/7.8	4.3/1/7.8	Report/Report	
Se, Dis (µg/l)	38	0.24/<1/6	0.24/<1/6	Report/Report	
Ag, Dis (µg/l)	38	0.02/<0.05/0.16	0.02/<0.05/0.16	Report/Report	
Zn, Dis (µg/l)	38	70/28/194	70/28/194	Report/Report	
WET, chronic					
pimephales lethality, Stat Diff	5	//	100/100/100	>=IWC	
pimephales lethality, IC25	5	//	100/100/100		
ceriodaphnia lethality, Stat Diff	5	//	100/100/100	>=IWC	
ceriodaphnia lethality, IC25	5	//	100/98/100		
pimephales toxicity, Stat Diff	6	//	100/100/100	Report	
pimephales toxicity, IC25	6	//	100/100/100		
ceriodaphnia toxicity, Stat Diff	6	//	100/100/100	Report	
ceriodaphnia toxicity, IC25	6	//	100/100/100		

B. Compliance With Terms and Conditions of Previous Permit

1. Effluent Limitations – The data shown in the preceding table(s) indicates compliance with the numeric limitations of the previous permit.

In accordance with 40 CFR Part 122.41(a), any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

VI. DISCUSSION OF EFFLUENT LIMITATIONS

A. Regulatory Basis for Limitations

1. Technology Based Limitations
 - a. Federal Effluent Limitation Guidelines – The Federal Effluent Limitation Guidelines for domestic wastewater treatment facilities are the secondary treatment standards. These standards have been adopted into, and are applied out of, Regulation 62, the Regulations for Effluent Limitations.
 - b. Regulation 62: Regulations for Effluent Limitations – These Regulations include effluent limitations that apply to all discharges of wastewater to State waters and are shown in Section VIII of the WQA. These regulations are applicable to the discharge from the City of Telluride WWTF.
2. Numeric Water Quality Standards - The WQA contains the evaluation of pollutants limited by water quality standards. The mass balance equation shown in Section VI of the WQA was used for most pollutants to calculate the potential water quality based effluent limitations (WQBELs), M_2 , that could be discharged without causing the water quality standard to be violated. For ammonia, the AMMTOX Model was used to determine the maximum assimilative capacity of the receiving stream. A detailed discussion of the calculations for the maximum allowable concentrations for the relevant parameters of concern is provided in Section V of the Water Quality Assessment developed for this permitting action.

The maximum allowable effluent pollutant concentrations determined as part of these calculations represent the calculated effluent limits that would be protective of water quality. These are also known as the water quality-based effluent limits (WQBELs). Both acute and chronic WQBELs may be calculated based on acute and chronic standards, and these may be applied as daily maximum (acute) or 30-day average (chronic) limits.

3. Narrative Water Quality Standards - Section 31.11(1)(a)(iv) of The Basic Standards and Methodologies for Surface Waters (Regulation No. 31) includes the narrative standard that State surface waters shall be free of substances that are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life.
 - a. Whole Effluent Toxicity - The Water Quality Control Division has established the use of WET testing as a method for identifying and controlling toxic discharges from wastewater treatment facilities. WET testing is being utilized as a means to ensure that there are no discharges of pollutants "in amounts, concentrations or combinations which are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life" as required by Section 31.11 (1) of the Basic Standards and Methodologies for Surface Waters. The requirements for WET testing are being implemented in accordance with Division policy, Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010). Note that this policy has recently been updated and the permittee should refer to this document for additional information regarding WET.

4. Water Quality Regulations, Policies, and Guidance Documents

- a. Antidegradation - Since the receiving water is Undesignated, an antidegradation review is required pursuant to Section 31.8 of The Basic Standards and Methodologies for Surface Water. As set forth in Section VII of the WQA, an antidegradation evaluation was conducted for pollutants when water quality impacts occurred and when the impacts were significant. Based on the antidegradation requirements and the reasonable potential analysis discussed above, antidegradation-based average concentrations (ADBACs) may be applied.

According to Division procedures, the facility has three options related to antidegradation-based effluent limits: (1) the facility may accept ADBACs as permit limits (see Section VII of the WQA); (2) the facility may select permit limits based on their non-impact limit (NIL), which would result in the facility not being subject to an antidegradation review and thus the antidegradation-based average concentrations would not apply (the NILs are also contained in Section VII of the WQA); or (3) the facility may complete an alternatives analysis as set forth in Section 31.8(3)(d) of the regulations which would result in alternative antidegradation-based effluent limitations.

The effluent must not cause or contribute to an exceedance of a water quality standard and therefore the WQBEL must be selected if it is lower than the NIL. Where the WQBEL is not the most restrictive, the discharger may choose between the NIL or the ADBAC: the NIL results in no increased water quality impact; the ADBAC results in an “insignificant” increase in water quality impact. The ADBAC limits are imposed as two-year average limits.

- b. Antibacksliding – As the receiving water is designated Reviewable or Outstanding, and the Division has performed an antidegradation evaluation, in accordance with the Antidegradation Guidance, the antibacksliding requirements in Regulation 61.10 have been met.
- c. Determination of Total Maximum Daily Loads (TMDLs) – This stream segment is not on the State’s 303(d) list, and therefore TMDLs do not apply. However, it is listed in the monitoring and evaluation list for lead. If the segment is moved to 303(d) list of State impaired waters list then the Division will be developing a TMDL with associated waste load allocations for the segment.

Consistent with Division practice, this permit may establish monitoring requirements for this pollutant for data collection.

- d. Colorado Mixing Zone Regulations – Pursuant to section 31.10 of The Basic Standards and Methodologies for Surface Water, a mixing zone determination is required for this permitting action. The Colorado Mixing Zone Implementation Guidance, dated April 2002, identifies the process for determining the meaningful limit on the area impacted by a discharge to surface water where standards may be exceeded (i.e., regulatory mixing zone). This guidance document provides for certain exclusions from further analysis under the regulation, based on site-specific conditions.

The guidance document provides a mandatory, stepwise decision-making process for determining if the permit limits will not be affected by this regulation. Exclusion, based on Extreme Mixing Ratios, may be granted if the ratio of the facility design flow to the chronic low flow (30E3) is greater than 2:1. Since the ratio of the chronic low flow to the design flow is

2.8:1, the permittee must perform additional studies to determine if further requirements apply.

The remaining threshold tests require site-specific information that is currently not available and thus a determination cannot be made about how the regulation may affect the setting of effluent limits in this permit. Therefore, a compliance schedule is necessary for acquisition of this information, which will be used to complete the testing of exclusion thresholds before the next permit renewal.

- e. Salinity Regulations – In compliance with the Colorado River Salinity Standards and the Colorado Discharge Permit System Regulations, the permittee shall monitor for total dissolved solids on a **Monthly** basis. Samples shall be taken at Permitted Feature 001A.

The average concentration discharged is less than 500 mg/l, and therefore the facility is exempt from further requirements other than monitoring for TDS.

- f. Reasonable Potential Analysis – Using the assimilative capacities contained in the WQA, an analysis must be performed to determine whether to include the calculated assimilative capacities as WQBELs in the permit. This reasonable potential (RP) analysis is based on the Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, dated December, 2002. This guidance document utilizes both quantitative and qualitative approaches to establish RP depending on the amount of available data.

A qualitative determination of RP may be made where ancillary and/or additional treatment technologies are employed to reduce the concentrations of certain pollutants. Because it may be anticipated that the limits for a parameter could not be met without treatment, and the treatment is not coincidental to the movement of water through the facility, limits may be included to assure that treatment is maintained.

A qualitative RP determination may also be made where a federal ELG exists for a parameter, and where the results of a quantitative analysis results in no RP. As the federal ELG is typically less stringent than a limitation based on the WQBELs, if the discharge was to contain concentrations at the ELG (above the WQBEL), the discharge may cause or contribute to an exceedance of a water quality standard.

To conduct a quantitative RP analysis, a minimum of 10 effluent data points from the previous 5 years, should be used. The equations set out in the guidance for normal and lognormal distribution, where applicable, are used to calculate the maximum estimated pollutant concentration (MEPC). For data sets with non-detect values, and where at least 30% of the data set was greater than the detection level, MDLWIN software is used consistent with Division guidance to generate the mean and standard deviation, which are then used to establish the multipliers used to calculate the MEPC. If the MDLWIN program cannot be used the Division's guidance prescribes the use of best professional judgment.

For some parameters, recent effluent data or an appropriate number of data points may not be available, or collected data may be in the wrong form (dissolved vs total) and therefore may not be available for use in conducting an RP analysis. Thus, consistent with Division procedures, monitoring will be required to collect samples to support a RP analysis and subsequent decisions for a numeric limit. A compliance schedule may be added to the permit to require the request of an RP analysis once the appropriate data have been collected.

For other parameters, effluent data may be available to conduct a quantitative analysis, and therefore an RP analysis will be conducted to determine if there is RP for the effluent discharge to cause or contribute to exceedances of ambient water quality standards. The guidance specifies that if the MEPC exceeds the maximum allowable pollutant concentration (MAPC), limits must be established and where the MEPC is greater than half the MAPC (but less than the MAPC), monitoring must be established. Table VI-1 contains the calculated MEPC compared to the corresponding MAPC, and the results of the reasonable potential evaluation, for those parameters that met the data requirements. The RP determination is discussed for each parameter in the text below.

Table VI-1 – Reasonable Potential Analysis

<i>Pollutant</i>	<i>Maximum of 30-Day Avg Effluent Conc. Or MEPC</i>	<i>30-Day Avg Proposed WQBEL</i>	<i>30-Day Avg RP</i>	<i>Maximum of Daily Max or 7-Day Avg Effluent Conc. Or MEPC</i>	<i>Daily Max or 7-Day Avg Proposed WQBEL</i>	<i>Daily Max RP</i>	<i>Maximum of 2-Yr Avg Effluent Conc. Or MEPC</i>	<i>Proposed ADBACs</i>	<i>2-Year Avg RP</i>
Temp Daily Max (°C) June-Sept				NA	21.7	Monitor			
Temp Daily Max (°C) Oct-May				NA	13	Monitor			
Temp MWAT (°C) June-Sept	NA	17	Monitor						
Temp MWAT (°C) Oct-May	NA	9	Monitor						
DO (mg/l)				7.5	NA	NA			
E. coli (#/100 ml)	42	468	Yes (Qual)	331	936	Yes (Qual)	NA	NA	NA
TRC (mg/l)	0	0.02	Yes (Qual)	0	0.067	Yes (Qual)	NA	NA	NA
Total Inorganic Nitrogen (mg/l)	NA			NA	35	Monitor	NA	NA	NA
NH3 as N, Tot (mg/l) Jan	2.7	2.8	Yes (Qual)	8.8	22.5	Yes (Qual)	2.7	NA	NA
NH3 as N, Tot (mg/l) Feb	0.73	2.8	Yes (Qual)	1.16	25	Yes (Qual)	0.57	NA	NA
NH3 as N, Tot (mg/l) Mar	0.48	2.8	Yes (Qual)	1.34	35	Yes (Qual)	0.465	NA	NA
NH3 as N, Tot (mg/l) Apr	0.53	28	Yes (Qual)	0.84	29	Yes (Qual)	0.39	3.4	Yes (Qual)
NH3 as N, Tot (mg/l) May	0.86	55	Yes (Qual)	1.86	58	Yes (Qual)	0.86	8.3	Yes (Qual)
NH3 as N, Tot (mg/l) Jun	1.9	63	Yes (Qual)	8.2	63	Yes (Qual)	1.9	15	Yes (Qual)
NH3 as N, Tot (mg/l) Jul	1.06	34	Yes (Qual)	3.5	56	Yes (Qual)	0.97	5	Yes (Qual)
NH3 as N, Tot (mg/l) Aug	0.94	27	Yes (Qual)	1.22	46	Yes (Qual)	0.94	4	Yes (Qual)
NH3 as N, Tot (mg/l) Sep	0.61	19	Yes (Qual)	1.14	31	Yes (Qual)	0.61	2.7	Yes (Qual)
NH3 as N, Tot (mg/l) Oct	0.6	19.5	Yes (Qual)	1.57	33	Yes (Qual)	0.6	2.9	Yes (Qual)
NH3 as N, Tot (mg/l) Nov	0.51	2.8	Yes (Qual)	0.99	30	Yes (Qual)	0.34	NA	NA
NH3 as N, Tot (mg/l) Dec	3.9	2.8	Yes (Qual)	7.8	24	Yes (Qual)	3.9	NA	NA
Al, TR (µg/l)	NA	3070	No (Qual)	NA	19915	No (Qual)	NA	461	No (Qual)
As, TR (µg/l)	5.5	0.076	Yes	NA	NA	NA	NA	NA	NA
As, Dis (µg/l)	NA	NA	NA	NA	1174	No (Qual)	NA	166	No (Qual)
Cd, Dis (µg/l)	1	0.56	Yes	0	6.7	Qualitative	0.1	NA	NA
Cr+3, TR (µg/l)	NA	NA	NA	NA	175	No (Qual)	NA	26	Monitor
Cr+3, Dis (µg/l)	25	378	No	NA	NA	NA	2.4	57	No
Cr+6, Dis (µg/l)	15	10	Yes	15	56	No	NA	NA	NA
Cu, Dis (µg/l)	18	18	Yes (Qual)	18	67	No (Qual)			
CN, Free (µg/l)				NA	18	No (Qual)	NA	2.6	No (Qual)
Fe, Dis (µg/l)	NA	892	Monitor				NA	476	Monitor
Fe, TR (µg/l)	448	3308	No				107	643	No
Pb, Dis (µg/l)	15	6.2	Yes	21	340	No	NA	NA	NA
Mn, Dis (µg/l)	117	256	No	117	11527	No	117	150	Monitor
Mo, TR (µg/l)	0	605	No (Qual)	NA	NA	NA	0	91	No (Qual)
Hg, Tot (µg/l)	0	0.038	Monitor	NA	NA	NA	NA	NA	NA
Ni, Dis (µg/l)	8.3	268	No	8.3	2244	No	5.0	42	No
Se, Dis (µg/l)	12	6	Yes	12	64	No	NA	NA	NA
Ag, Dis (µg/l)	0.23	0.53	No	0.23	13	No	NA	NA	NA
Zn, Dis (µg/l)	308	190	Yes	308	197	Yes	NA	NA	NA
Chloride (mg/l)	NA	945	Monitor	NA	NA	NA	NA	163	Monitor
Sulfate (mg/l)	NA	712	Monitor	NA	NA	NA	NA	224	Monitor
Nonylphenol (µg/l)	NA	24	Monitor	NA	96	Monitor	NA	NA	NA

B. Parameter Evaluation

BOD₅ - The BOD₅ concentrations in Reg 62 are the most stringent effluent limits and are therefore applied. The removal percentages for BOD₅ also apply based on the Regulations for Effluent Limitations. These limitations are the same as those contained in the previous permit and are imposed upon the effective date of this permit.

Total Suspended Solids - The TSS concentrations in Reg 62 are the most stringent effluent limits and are therefore applied. The removal percentages for TSS also apply based on the Regulations for Effluent Limitations. These limitations are the same as those contained in the previous permit and are imposed upon the effective date of this permit.

Oil and Grease - The oil and grease limitations from the Regulations for Effluent Limitations are applied as they are the most stringent limitations. This limitation is the same as those contained in the previous permit and is imposed upon the effective date of this permit.

pH - This parameter is limited by the water quality standards of 6.5-9.0 s.u., as this range is more stringent than other applicable standards. This limitation is the same as that contained in the previous permit and is imposed upon the effective date of this permit.

E. Coli - The limitation for E. Coli is based upon the WQBEL as described in the WQA. A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter. Previous monitoring as shown in Table V-1 indicates that this limitation can be met and is therefore imposed upon the effective date of the permit.

Total Residual Chlorine (TRC) - The limitation for TRC is based upon the NIL as described in the WQA. A qualitative determination of RP has been made as chlorine may be used in the treatment process. Previous monitoring as shown in Table V-1 indicates that this limitation can be met and is therefore imposed upon the effective date of the permit.

Total Inorganic Nitrogen - There were not enough data available to perform a RP analysis for this parameter. Therefore, this parameter has been added to the permit with a report only condition for the collection of data for a RP analysis.

Ammonia - The limitation for ammonia is based upon the NIL or ADBAC as described in the WQA. A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter. It should be noted there that the previous renewal did not take the design flow changes from AD period to current when calculating the NIL, resulting in a relatively larger permit limits. This renewal considered those design flows and the appropriate NILs are assigned. Previous monitoring as shown in Table V-1 indicates that this limitation can be met and is therefore effective immediately.

Total Recoverable Aluminum - There were no data available to perform a RP analysis for this parameter. However, the potential limitations are significantly high and therefore, a qualitative no RP has been made for this parameter. No limits will be added to the permit.

Total Arsenic - The RP analysis for this parameter was based upon the WQBEL as described in the WQA. With the available data the log-normal program was used to determine the appropriate statistics to determine the MEPC. The MEPC was greater than the MAPC and therefore limitations are required.

Therefore a 30-day average requirement has been added to the permit. This limitation is more stringent than the previous limit and, the permittee may not be able to consistently meet this limitation and a compliance schedule has been added to the permit to give the permittee time to meet this limitation.

Dissolved Arsenic – A qualitative no RP has been made for this parameter based on the potential limitation of 1174/166 ug/l for daily maximum /ADBAC as compared to a TR arsenic of 5 ug/l. Therefore no limitations will be added to the permit.

Potentially Dissolved Cadmium – The RP analysis for this parameter was based upon the WQBEL as described in the WQA. With the available data the log-normal program was used to determine the appropriate statistics to determine the MEPC. The MEPC was greater than the MAPC and therefore limitations are required. Therefore a 30-day average requirement has been added to the permit. This limitation is more stringent than the previous limit and, the permittee may not be able to consistently meet this limitation and a compliance schedule has been added to the permit to give the permittee time to meet this limitation.

Total Recoverable Trivalent Chromium – A qualitative no RP has been made for this parameter based on the potential limitation of 176 ug/l for daily maximum compared to a maximum potentially dissolved CrIII of 25 ug/l. However, ADBAC for this parameter is 26 ug/l and therefore a monitoring will be added to the permit for 2-year average.

Potentially Dissolved Trivalent Chromium – A qualitative no RP has been made for this parameter based on the potential limitation of 378 ug/l for 30-day average requirement as compared to a of 5 ug/l. Therefore no limitations will be added to the permit.

Dissolved Hexavalent Chromium – A qualitative RP has been made for this parameter for 30-day requirement based on a NIL of 10 ug/l and MEPC of 15 ug/l. Limitation will be added to the permit. This limitation is more stringent than the previous limit and the permittee may not be able to consistently meet this limitation and a compliance schedule has been added to the permit to give the permittee time to meet this limitation.

Potentially Dissolved Copper – A qualitative RP has been made for this parameter based on NIL a limitation will be added to the permit. Since this is more stringent limitation a compliance schedule will be provided.

Cyanide - There were no data available to perform a RP analysis for this parameter. However, this parameter had a no RP in the previous fact sheet and therefore, no limitation will be added to the permit.

Total Recoverable Iron - The RP analysis for this parameter was based upon the WQBEL/and ADBAC as calculated in the WQA. With the available data MDLWIN/LogNormal programs were used to determine the appropriate statistics to determine the MEPC. The MEPC was less than half of the MAPC and therefore limitations are not necessary at this time.

Dissolved Iron - There were no data available to perform a RP analysis for this parameter. Therefore, this parameter has been added to the permit with a report only condition for the collection of data for a RP analysis.

Potentially Dissolved Lead - The RP analysis for this parameter was based upon the NIL as described in the WQA. With the available data the normal program was used to determine the appropriate statistics to

determine the MEPC. The MEPC for 30-day average was greater than the MAPC and therefore limitations are required. Therefore a 30-day average requirement has been added to the permit. This limitation is more stringent than the previous limit and, the permittee may not be able to consistently meet this limitation and a compliance schedule has been added to the permit to give the permittee time to meet this limitation.

Dissolved Manganese - The RP analysis for this parameter was based upon the WQBEL as described in the WQA. With the available data the normal/log-normal programs were used to determine the appropriate statistics to determine the MEPC. The MEPC for 30-day average was greater than the half of MAPC and therefore monitoring is required for 30-day and 2-year average.

Total Recoverable Molybdenum- A qualitative no RP has been made for this parameter since the potential limitations based on WQBEL/ADBAC are 605/91 ug/l, as compared to a maximum recorded molybdenum of 0 ug/l (less than detect) at a detection limit of 50 ug/l. No limitation will be added to the permit.

Total Mercury - A qualitative RP for monitoring with a lower detection level has been made for this parameter since the potential limitations based on WQBEL is 0.038 ug/l, as compared to a maximum recorded mercury of 0 ug/l (less than detect) at a detection limit of 0.2 ug/l. A low level mercury monitoring requirement will be added to the permit.

Potentially Dissolved Nickel - The RP analysis for this parameter was based upon the WQBEL/and ADBAC as calculated in the WQA. With the available data LogNormal program was used to determine the appropriate statistics to determine the MEPC. The MEPC was less than half of the MAPC and therefore limitations are not necessary at this time.

Potentially Dissolved Selenium - The RP analysis for this parameter was based upon the NIL as calculated in the WQA. The MEPC was greater than MAPC for 30-day average, limitation will be needed. This limitation is more stringent than the previous limit and, the permittee may not be able to consistently meet this limitation and a compliance schedule has been added to the permit to give the permittee time to meet this limitation.

Potentially Dissolved Silver - A qualitative no RP has been made for this parameter since the potential limitations based on WQBELs are 0.53/13 ug/l, as compared to a MEPC of 0.23 ug/l. No limitation will be added to the permit.

Potentially Dissolved Zinc - The RP analysis for this parameter was based upon the NIL as described in the WQA. With the available data the normal program was used to determine the appropriate statistics to determine the MEPC. The MEPCs for 30-day average and daily maximum were greater than the MAPCs and therefore limitations are required. Therefore, 30-dayaverage and daily maximum requirement have been added to the permit. This limitation is more stringent than the previous limit and, the permittee may not be able to consistently meet this limitation and a compliance schedule has been added to the permit to give the permittee time to meet this limitation.

Chloride and Sulfate- No data were available to run an RP analysis and there monitoring will be added to the permit.

Temperature-The MWAT is the maximum weekly average temperature, as determined by a seven day rolling average, using at least 3 equally spaced temperature readings in a 24-hour day (at least every 8

hours for a total of at least 21 data points).

The daily maximum is defined as the maximum 2 hour average, with a minimum of 12 equally spaced measurements throughout the day. As both of these temperature requirements will likely require the use of automated temperature measurements and recordings, the permittee is given until September 1, 2013, to have the proper equipment in place to take the required readings.

Organics – The effluent is not expected or known to contain organic chemicals, and therefore, limitations for organic chemicals are not needed in this permit.

Whole Effluent Toxicity (WET) Testing – This is a domestic major wastewater treatment facility. Both ammonia and metals are expected in the discharge. These parameters and their interaction could be harmful to the aquatic life and therefore, WET testing will be needed.

1. **In-Stream Waste Concentration (IWC)** – Where monitoring or limitations for WET are deemed appropriate by the Division, the chronic in-stream dilution is critical in determining whether acute or chronic conditions shall apply. In accordance with Division policy, for those discharges where the chronic IWC is greater than 9.1% and the receiving stream has a Class 1 Aquatic Life use or Class 2 Aquatic Life use with all of the appropriate aquatic life numeric standards, chronic conditions will normally apply. Where the chronic IWC is less than or equal to 9.1, or the stream is not classified as described above, acute conditions will normally apply. The chronic IWC is determined using the following equation:

$$IWC = [Facility\ Flow\ (FF) / (Stream\ Chronic\ Low\ Flow\ (annual) + FF)] \times 100\%$$

The flows and corresponding IWC for the appropriate discharge point are:

Permitted Feature	Chronic Low Flow, 30E3 (cfs)	Facility Design Flow (cfs)	IWC, (%)
001A	8.9	3.2	26

The IWC for this permit is 26 %, which represents a wastewater concentration of 26 % effluent to 74% receiving stream.

2. **General Information** – The permittee should read the WET testing section of Part I of the permit carefully, as this information has been updated in accordance with the Division's updated policy, Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010) . The permit outlines the test requirements and the required follow-up actions the permittee must take to resolve a toxicity incident. The permittee should also read the above mentioned policy which is available on the Permit Section website. The permittee should be aware that some of the conditions outlined above may be subject to change if the facility experiences a change in discharge, as outlined in Part II.A.2. of the permit. Such changes shall be reported to the Division immediately.

C. Parameter Speciation

Total / Total Recoverable Metals (EXCEPT Arsenic)

For standards based upon the total and total recoverable methods of analysis, the limitations are based upon the same method as the standard.

Total / Total Recoverable Arsenic

For total recoverable arsenic, the analysis may be performed using a graphite furnace, however, this method may produce erroneous results and may not be available to the permittee. Therefore, the total method of analysis will be specified instead of the total recoverable method.

Total Mercury

Until recently there has not been an effective method for monitoring low-level total mercury concentrations in either the receiving stream or the facility effluent. Monitoring for total mercury has been accomplished as part of past permit conditions and analytical results have all been found at less than detectable levels. However, detection levels only as low as 0.2 ug/l have been achieved, versus a total mercury limit of 0.011 ug/l.

To ensure that adequate data are gathered to determine reasonable potential and consistent with Division initiatives for mercury, quarterly effluent monitoring for total mercury at low-level detection methods will be required by the permit.

Dissolved Metals / Potentially Dissolved

For metals with aquatic life-based dissolved standards, effluent limits and monitoring requirements are typically based upon the potentially dissolved method of analysis, as required under Regulation 31, Basic Standards and Methodologies for Surface Water. Thus, effluent limits and/or monitoring requirements for these metals will be prescribed as the “potentially dissolved” form.

Dissolved Iron and Dissolved Manganese

The dissolved iron and chronic manganese standards are drinking water-based standards. Thus, sample measurements for these two parameters must reflect the dissolved fraction of the metals.

TR Trivalent Chromium

For total recoverable trivalent chromium, the regulations indicate that standard applies to the total of both the trivalent and hexavalent forms. Therefore, monitoring for total recoverable chromium will be required.

Hexavalent Chromium

For hexavalent chromium, samples must be unacidified. Accordingly, dissolved concentrations will be measured rather than potentially dissolved concentrations.

VII. ADDITIONAL TERMS AND CONDITIONS

A. Monitoring

Effluent Monitoring – Effluent monitoring will be required as shown in the permit document. Refer to the permit for locations of monitoring points. Monitoring requirements have been established in accordance with the frequencies and sample types set forth in the Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Industrial and Domestic Wastewater Treatment Facilities. This policy includes the methods for reduced monitoring frequencies based upon facility compliance as well as for considerations given in exchange for instream monitoring programs initiated by the permittee. Table VII-1 shows the results of the reduced monitoring frequency analysis for Permitted Feature 001A, based upon compliance with the previous permit.

Table VII-1 – Monitoring Reduction Evaluation

<i>Parameter</i>	<i>Proposed Permit Limit</i>	<i>Average of 30-Day (or Daily Max) Average Conc.</i>	<i>Standard Deviation</i>	<i>Long Term Characterization (LTC)</i>	<i>Reduction Potential</i>
<i>pH (su) Minimum</i>	<i>min 6.5</i>	6.8	0.15	6.5	<i>1 Step</i>
<i>pH (su) Maximum</i>	<i>max 9.0</i>	7.3	0.15	7.6	
<i>E. coli (#/100 ml)</i>	468	5	5.3	15.6	3 Levels
<i>TRC (mg/l)</i>	0.023	0	0	0	3 Levels
<i>NH₃ as N, Tot (mg/l)</i>	13.5	0.24	0.23	0.7	3 Levels
<i>BOD₅, effluent (mg/l)</i>	30	4.9	1.6	8.1	3 Levels
<i>TSS, effluent (mg/l)</i>	30	8.4	3.6	15.6	2 Levels
<i>Oil and Grease (mg/l)</i>	10	0	0	0	3 Levels
<i>As, TR (µg/l)</i>	0.076	1.6	0.98	3.56	None
<i>Cr+3, Dis (µg/l)</i>	378	0	0	0	3 Levels
<i>Cr+6, Dis (µg/l)</i>	10	0	0	0	3 Levels
<i>Cu, Dis (µg/l)</i>	18	18	0.00042	18.00084	None
<i>Pb, Dis (µg/l)</i>	6.2	1.4	1.4	4.2	2 Levels
<i>Mn, Dis (µg/l)</i>	256	11	10	31	3 Levels
<i>Hg, Tot (µg/l)</i>	0.038	0	0	0	3 Levels
<i>Se, Dis (µg/l)</i>	6	0.39	1.3	2.99	3 Levels
<i>Zn, Dis (µg/l)</i>	190	70	35	140	2 Levels

B. Reporting

1. Discharge Monitoring Report – The City of Telluride facility must submit Discharge Monitoring Reports (DMRs) on a monthly basis to the Division. These reports should contain the required summarization of the test results for all parameters and monitoring frequencies shown in Part I.B of the permit. See the permit, Part I.B, C, D and/or E for details on such submission.
3. Special Reports – Special reports are required in the event of an upset, bypass, or other noncompliance. Please refer to Part II.A. of the permit for reporting requirements. As above, submittal of these reports to the US Environmental Protection Agency Region VIII is no longer required.

C. Signatory and Certification Requirements

Signatory and certification requirements for reports and submittals are discussed in Part I.E.6. of the permit.

D. Compliance Schedules

The following compliance schedules are included in the permit. See Part I.B of the permit for more information.

Metals, mixing zone and temperature recording equipment

All information and written reports required by the following compliance schedules should be directed

to the Permits Section for final review unless otherwise stated.

E. Stormwater

Stormwater Evaluation: Pursuant to 5 CCR 1002-61.3(2), wastewater treatment facilities with a design flow of 1.0 MGD or more, or that are required to have an approved pretreatment program, are specifically required to obtain stormwater discharge permit coverage, or a Stormwater No Exposure Certification, in order to discharge stormwater from their facilities to state waters. The stormwater discharge permit applicable to wastewater treatment facilities is the CDPS General Permit for Stormwater Discharges Associated with Non-Extractive Industrial Activity.

Division records indicate that the Town of Telluride applied for and obtained coverage under a Stormwater No Exposure Certification for the Telluride Regional WWTF facility. The No Exposure certification number is CONOX0153.

F. Economic Reasonableness Evaluation

Section 25-8-503(8) of the revised (June 1985) Colorado Water Quality Control Act required the Division to "determine whether or not any or all of the water quality standard based effluent limitations are reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons, and are in furtherance of the policies set forth in sections 25-8-192 and 25-8-104."

The Colorado Discharge Permit System Regulations, Regulation No. 61, further define this requirement under 61.11 and state: "Where economic, environmental, public health and energy impacts to the public and affected persons have been considered in the classifications and standards setting process, permits written to meet the standards may be presumed to have taken into consideration economic factors unless:

- a. A new permit is issued where the discharge was not in existence at the time of the classification and standards rulemaking, or
- b. In the case of a continuing discharge, additional information or factors have emerged that were not anticipated or considered at the time of the classification and standards rulemaking."

The evaluation for this permit shows that the Water Quality Control Commission, during their proceedings to adopt the Classifications and Numeric Standards for Gunnison and Lower Dolores River Basins, considered economic reasonableness.

Furthermore, this is not a new discharger and no new information has been presented regarding the classifications and standards. Therefore, the water quality standard-based effluent limitations of this permit are determined to be reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons and are in furtherance of the policies set forth in Sections 25-8-102 and 104. If the permittee disagrees with this finding, pursuant to 61.11(b)(ii) of the Colorado Discharge Permit System Regulations, the permittee should submit all pertinent information to the Division during the public notice period.

Kenan Diker
December 19, 2012

VIII. REFERENCES

- A. Colorado Department of Public Health and Environment, Water Quality Control Division Files, for Permit Number CO0041840.
- B. “Design Criteria Considered in the Review of Wastewater Treatment Facilities”, Policy 96-1, Colorado Department of Public Health and Environment, Water Quality Control Commission, April 2007.
- C. Basic Standards and Methodologies for Surface Water, Regulation No. 31, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 1, 2012.
- D. Classifications and Numeric Standards for Gunnison and Lower Dolores River Basins, Regulation No. 35, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2013.
- E. Colorado Discharge Permit System Regulations, Regulation No. 61, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 30, 2012.
- F. Regulations for Effluent Limitations, Regulation No. 62, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective July 30, 2012.
- G. Pretreatment Regulations, Regulation No. 63, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective April 01, 2007.
- H. Biosolids Regulation, Regulation No. 64, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2010.
- I. Colorado River Salinity Standards, Regulation No. 39, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective August 30, 1997.
- J. Section 303(d) List of Water Quality Limited Segments Requiring TMDLs, Regulation No 93, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective April 30, 2012.
- K. Antidegradation Significance Determination for New or Increased Water Quality Impacts, Procedural Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective December 2001.
- L. Memorandum Re: First Update to (Antidegradation) Guidance Version 1.0, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 23, 2002.
- M. Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, Colorado Department of Public Health and Environment, Water Quality Control Division, effective December 2002.
- N. The Colorado Mixing Zone Implementation Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 2002.

- O. Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Domestic and Industrial Wastewater Treatment Facilities, Water Quality Control Division Policy WQP-20, May 1, 2007.
- P. Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops, Water Quality Control Division Policy WQP-24, March 10, 2008.
- Q. Implementing Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (WET) Testing, Colorado Department of Public Health and Environment, Water Quality Control Division Policy Permits-1, September 30, 2010.
- R. Policy for Conducting Assessments for Implementation of Temperature Standards in Discharge Permits, Colorado Department of Public Health and Environment, Water Quality Control Division, Policy Number WQP-23, effective July 3, 2008.
- S. Policy for Permit Compliance Schedules, Colorado Department Public Health and Environment, Water Quality Control Division Policy Number WQP-30, effective December 2, 2010.
- T. Procedural Regulations for Site Applications for Domestic Wastewater Treatment Works, Regulation No. 22, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective September 30, 2009.
- U. Regulation Controlling discharges to Storm Sewers, Regulation No. 65, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective May 30, 2008.
- V. Water and Wastewater Facility Operator Certification Requirements, Regulation No. 100, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective September 30, 2007.

Kenan Diker
December 20, 2012

VIII. PUBLIC NOTICE COMMENTS